tissue in the uterus. In a great majority of cases he believes that the uterus is completely empty after labor or abortion, hence it is of little value to explore the recently emptied uterus for the organisms are in the uterine wall almost from the beginning of the infection and have now passed more deeply in or beyond it. Infection usually spreads along the ovarian veins accompanied by lymphangitis producing thickening of the broad and other pelvic ligaments which can often be detected by palpation. When chills occur large veins are usually involved, although pyosalpinx is not common after labor at term; ovarian abscess is more frequently found, active peritonitis is unusual and is generally seen around a suppurating ovary or tube, but in fatal cases passive peritoneal infection is usually present. A blood-stained fluid rich in streptococci is present in the peritoneum in these patients. Pneumonia, pleurisy and pericarditis may also develop. In the treatment of these cases flavaine or one of the antiseptics of the chlorine group, thoroughly applied in the uterine cavity may be useful. By the time symptoms have developed in most cases the organisms are in the uterine wall beyond the reach of antiseptics, hence the practice of giving an intra-uterine douche when there is considerable fever, to wash out or destroy organisms in the uterus, is useless. If tubes be introduced by the Carrel method with the hope of destroying bacteria the process is a difficult one. The writer believes that if the uterus can be thoroughly curetted so soon as the first symptoms arise, and this be followed by insertion of irrigating tubes in the Carrel-Dakin method, this treatment may prove efficient. To be successful this should be done within twelve hours of the first considerable rise of temperature. If a considerable mass of placenta be retained, this should be removed. In treating war wounds the excision of infected tissue in the wound before infection had time to develop was often successful but in the treatment of puerperal septic infection such a method would require the performance of hysterectomy. The writer has little confidence in vaccines or the intravenous injections of antitoxic serums or antiseptic injections of colloidal metals. Ligature of the ovarian veins and lymphatics accompanied by excision frequently gives good results. The writer is accustomed in dealing with sepsis after abortion when definite thickening can be felt, to remove the whole of the thickened pelvic ligament from the side of the uterus up to the highest accessible point in the line of the ovarian vessels. He has seen marked improvement follow this procedure. Prevention, however, is far more successful than the attempt at radical cure.

The Surgical Treatment of Puerperal Sepsis.—WHITEHOUSE (*British Med. Jour.*, August 21, 1920) continues the discussion of this subject before the British Medical Association. He has applied the Carrel method to 15 cases of very severe septic infection with one death. Under anesthesia the uterus is very carefully curetted with a sharp curette; should hemorrhage follow this must be controlled before the Carrel tubes are introduced and often a gauze pack is required. The application of absolute alcohol is efficient in some cases when bleeding is severe. From four to six tubes are introduced at varying heights within the uterine cavity, these should be suffi-

ciently long so that the connecting transverse glass tube may be rested upon the pubis to permit further manipulation; the tubes can be kept in position by packing the vagina lightly with strips of bismuth or plain gauze. An antiseptic ointment is thoroughly applied to the vulva or perineum to prevent excoriation. A pad of gauze and absorbent wool is placed over the vulva and the transverse glass tube attached to the bandage over the abdomen. Fresh solution is injected every two hours. As a rule the patient's temperature falls within twelve hours and the tubes are often expelled by uterine contraction. Should the tubes be expelled while the temperature is still high, they must be replaced and for this anesthesia is usually not necessary. A well-known argument against curetting was that it broke down the zone of resistance, but it has been shown that this zone or tissue acts as a nidus for the production of bacteria. A constant application of the antiseptic solution to the interior of the uterus is essential for the success of this method. The writer's experience shows that the risk of pyemia, thrombosis or parametritis is not increased by the use of a sharp curette. When these conditions developed after treatment streptococci had already been found in the blood. The only case of parametric abscess observed by the writer developed in a patient in whom curetting was not done. This treatment cannot be carried out by any but experienced and trained obstetricians and in such cases the risk of perforation is not great. The writer has not had success by using colargol and bichloride of mercury intravenously. A solution of flavaine 1 to 1000, in normal salt, he has employed intravenously in doses of 10 to 15 c.c. given in the median basilic vein, the same technic is employed which is used in the treatment of syphilis by salvarsan. One injection is given daily, sometimes two, night and morning. The results have been good, but sufficient experience has not accumulated to justify a positive conclusion.

Intravenous Protein Therapy in Puerperal Septicemia. — Gow (*British Med. Jour.*, August 21, 1920) contributed a paper before the British Medical Association describing his experience by this method. He uses a solution of peptone injecting intravenously from 8 to 10 c.c., this is increased 2 c.c. every other day or so until from 16 to 20 c.c. are given at one time. The injection must be administered slowly and carefully. A marked and rapid fall in blood-pressure follows, the pulse becomes more frequent and if leukocytosis has been present there develops a high degree of peripheral leukopenia, this condition lasts but a short time. The quality of the pulse is of special value and the radial pulse should be counted during the injection, if more than thirty-four beats to a quarter of a minute are noted the injection is temporarily stopped. A hypodermic of adrenalin 1 to 1000 may become necessary. With the latter injections there is slight fulness in the head, slight cough, a stabbing pain in the bottom of the back or a little nausea, sometimes a chill, after the chill improvement is the rule. This treatment the writer considers a valuable adjunct to the use of sensitized vaccines. A vaccine made from the Streptococcus pyogenes may be used subcutaneously in doses of from 1 to 5,000,000, on three successive days; intravenously, larger doses may be employed. If intravenous injections are used they should not be given after eating, but when the stomach is empty if possible.